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ECHO Nevada emphasizes patient privacy and asks participants to not share ANY Protected Health Information during ECHO clinics.
OXY TO HEROIN –
HOW DID WE GET HERE?

Paul Snyder MA, LADC - S
OBJECTIVES

Review overdose deaths in the United States

Examine physiological and psychological opioid use dependence

Discuss treatment for dependence and chronic pain
How the Epidemic of Drug Overdose Deaths Ripples Across America

By HAEYOUN PARK and MATTHEW BLOCH JAN. 19, 2016

Overdose deaths per 100,000

2003 2004 2005 2006
2007 2008 2009 2010
2011 2012 2013 2014
Drugs Involved in U.S. Overdose Deaths - Among the more than 64,000 drug overdose deaths estimated in 2016, the sharpest increase occurred among deaths related to fentanyl and fentanyl analogs (synthetic opioids) with over 20,000 overdose deaths. Source: CDC WONDER
Perspective of 64,000 overdose deaths in a year

- 8,760 hours/year
- 7 deaths/hour
- Equivalent of a 737 jet crashing every day
- More deaths than auto accidents and gunshot wounds combined
The amount of opioids prescribed per person varied widely among counties in 2015.

Higher opioid prescribing puts patients at risk for addiction and overdose. The wide variation among counties suggests a lack of consistency among providers when prescribing opioids. The CDC Guideline for Prescribing Opioids for Chronic Pain offers recommendations that may help to improve prescribing practices and ensure all patients receive safer, more effective pain treatment.

SOURCE: CDC Vital Signs, July 2017
Post-Operative Medication Instructions

Patients are typically provided medications prior to surgery so they may be filled ahead of time. The prescription will expire in less than two weeks under DEA rules; please fill them and store them safely at home. Unless you are not returning home the day of surgery, consider leaving them at home.

Further instructions may be given at the time of surgery, but generally patients receive a block from the Anesthesiologist for post-operative pain control. Typically the block lasts 24 hours, but it is not unusual for them to last longer.

You have received two pain medications, both of which are double strength (10 mgs.), and a medication for nausea. Most patients start with the stronger medication and switch to the lesser pain medication in a few days.

Oxycodone (Percocet) - "for severe pain"
Hydromorphone (Norco/Vicodin) - "for pain"
Ondansetron (Zofran) - "for nausea"

Suggested regimen: Set the Hydrocodone aside and do not mix dosing with the Oxycodone. On the evening of your surgery, take a whole Zofran 30 minutes before bed and half an Oxycodone at bedtime. Three hours later take half an Oxycodone. Three hours later (six hours after you started) take half an Oxycodone with a whole Zofran. Continue this routine until the pain starts, at which time you will increase to a whole Oxycodone every three hours while you continue the whole Zofran every six hours.

If your surgery is after noon, you may consider starting this regimen at 6am the day following surgery. Nausea is typically far less problematic if you continue the Zofran for 48 hours. Use the Zofran as needed after that initial two-day period.

If you are having issues with the Oxycodone, such as nausea/itching/too sedated/etc, you can switch to the Hydrocodone at any time. Most patients believe the Hydrocodone is about 25% less strong, but others prefer it to the Oxycodone.

Do not wait to start your medications and do not get behind once the pain starts. You will be a lot more comfortable if you schedule dose and stay ahead. If you have any questions, contact [medical assistant] at [phone number] or, if after hours, the on-call physician at [phone number].
PAIN AS THE FIFTH VITAL SIGN

- 1996 Purdue Pharmaceuticals financed “Pain as the Fifth Vital Sign” campaign to help in the marketing of OxyContin
  - Objective - blood pressure, pulse, temperature, and respiratory rate
  - Subjective - pain - 1 to 10 - ☹️ ☻

- Addition of pain as a vital sign approved by the Joint Commission on Accreditation of Healthcare Organizations in 2000

- 1 pill = 12 hour pain relief

- Breakthrough pain – titrate from 40mg to 80mg
UNITED STATES LIKES PAIN PILLS

The U.S. equals 4.6% of the world population and consumes:

- Over 90% of the global opioid supply
- 95% of the hydrocodone produced

There is no ceiling for opioids.
OXYCODONE

- OxyContin most recognized and abused form
- Prescribed to relieve pain
- Twice as strong as morphine
- Time released (8-12 hours)
- Pills crushed and snorted or cooked down and injected to break down time release component
- Strong, heroin-like, euphoric effects
- Expensive
- Other variations: Percocet and Percodan
OXYMORPHONE (OPANA)

- Powerful semi-synthetic opioid analgesic (painkiller)
- $25-$30 a pill on the black market
- Doctors begin prescribing it over OxyContin
- Injecting Opana—according to FDA “abuse deterrent” coating makes it harder to inject
- Increased HIV/AIDS cases as a result
- Opana “voluntarily” removed from market

You Tube: OP Microwave Method
ZOHYDRO ER

- High dose hydrocodone narcotic painkiller
- Zohydro contains as much as 50 mg of hydrocodone
- Manufactured as a powder in a capsule, rather than a pill – easy to abuse
- 10 times more powerful than Vicodin
LETHAL DOSES OF HEROIN AND FENTANYL
Heroin use is part of a larger substance abuse problem.

Nearly all people who used heroin also used at least 1 other drug.

Most used at least 3 other drugs.

Heroin is a highly addictive opioid drug with a high risk of overdose and death for users.

People who are addicted to...

- Alcohol are 2x more likely to be addicted to heroin.
- Marijuana are 3x more likely to be addicted to heroin.
- Cocaine are 15x more likely to be addicted to heroin.
- Rx Opioid Painkillers are 40x more likely to be addicted to heroin.

EXOGENOUS PAIN MITIGATION AND DEPENDENCE

- **NSAIDS** - Aspirin, Ibuprofen (block COX enzymes which make prostaglandins which is triggered with pain caused by release of prostaglandins – inflammation)

- Exogenous Opioids: Morphine, Codeine, Heroin, act like Endogenous Opioids: endorphins.

- Opioids inhibit gabaergic neurons which regulate dopamine release for appropriate response (off switch to the off switch)

- Pleasure pathway (VTA, NA – Happiness, PFC – judgement of good and bad = do this again!) and amygdala (fear center - anxiety and stress)

- Although shut off still neurons still want to send their message – resulting in stronger messages being sent – (3 to 4 x’s more cyclic AMP)

- While on opioids – constipation and slow respiratory now diarrhea and high BP – Happiness has turned to dysphoria and anxiety
PAIN AND PLEASURE — NATURES MOST POWERFUL MOTIVATORS

- Thermoreceptors, photoreceptors, chemoreceptors, mechanoreceptors
  - **Nociceptive** – Peripheral pain
    - Inflammatory - visceral - somatic
    - Transporting Pain in to spinal cord from actual stimulation to the thalamus to the somatosensory cortex (identifies and localizes pain) and limbic system (emotional suffering) and prefrontal cortex (gives meaning for the pain)
    - Alpha Delta fibers –myelinated - fast – localized (sharp pain)
    - C fibers – unmyelinated – slow – non localized (burning, throbbing pain)
      - Short term opioid treatment effective
  - **Neuropathic pain** - Central –
    - Reticular Formation (Sleep/wake cycles and Alert!) Limbic System (Emotion) Periaqueductal gray matter (PAG – releases serotonin and noradrenaline, which release endorphins, enkaphalins, dysmorphins - endogenous opioids)
All addictive drugs, produce a pleasurable surge of the neurotransmitter dopamine in a region of the brain called the basal ganglia;

This area is responsible for controlling reward and our ability to learn based on rewards.

This is known as tolerance reflects the way the brain maintains balance and adjusts to a “new normal” – the frequent presence of the substance.

These same circuits control our ability to take pleasure from ordinary rewards like food, sex, and social interaction, and when they are disrupted by substance use, the rest of life can feel less and less enjoyable to the user when they are not using the substance.

Repeated use of a substance “trains” the brain to associate the rewarding high with other cues in the person’s life”; such as using friends, or places.
DRUGS AND THE BRAIN

Natural Rewards Elevate Dopamine Levels

Food

Sex

DRUGS AND THE BRAIN

Effects of Drugs on Dopamine Release

Amphetamine

Cocaine

Nicotine

Morphine

De Chiara and Imperato, PNAS, 1988
$$$$ STREET VALUE $$$$$

- Oxycodone cost up to $1 a mg
- Percocet about $8 a pill
- Valium about $7 a pill
- Vicodin about $7 a pill
- Methadone $10 per dose
- Fentanyl $65 a patch
- Heroin $15 per bag (1/10 of a gram)

Source: Nevada HIDTA (High Intensity Drug Trafficking Areas)
**NATIONAL INSTITUTE OF DRUG ABUSE:**

“The essence of addiction is the uncontrollable, compulsive drug seeking and use, even in the face of negative health and social consequences.”
DSM - V

- Taking the substance in larger amounts or for longer time than you meant to
- Wanting to cut down or stop using the substance but not being able to
- Spending a lot of time getting, using, or recovering from the effects of the substance
- Cravings and/or urges to use the substance
- Not managing to fulfill obligations at work, home or school, because of substance use
- Continuing to use, even when it causes problems in relationships
- Giving up important social, occupational or recreational activities because of substance use
- Using substances again and again, even when it puts you in danger
- Continuing to use, even when the you know you have a physical or psychological problem that could have been caused or made worse by the substance
- Needing more of the substance to get the effect you want (tolerance)
- Development of withdrawal symptoms, which can be relieved by taking more of the substance.
PreScribIng foR Pain – StaRt loW aNd Go SlOw

CDC opioid prescribing guidelines: Senate Bill 474: Prescription Monitoring Program:

- Initially try nondrug interventions (cognitive behavioral therapy or exercise) or nonopioid medications (anti-inflammatory).

- If opioids are used, prescribe the lowest effective dose and start with immediate-release opioids instead of extended-release opioids. Only provide the quantity needed for the expected duration of the pain.

- Monitor patients regularly to make sure opioids are improving pain without causing harm.

*These recommendation are not intended for patients who are in active cancer treatment, palliative care, or end-of-life care.*
WORKING WITH PATIENTS

Discussing why you don’t want to provide another opioid prescription after the patient is accustomed to them – Tolerance – Dependence

Takes time – there goes your lunch break.

Makes the patient upset.

Possible complaint – Press Ganey - there goes the bonus.

Possible lost patient.
SOLUTIONS

- Define what success looks like and the time frame
- Define the exit strategy

Create Contract/Agreement with the patient
Substance Use Specialists and Mental Health providers spend an hour with patients
Create a team approach
  - Not all practitioners are created equal
    - Qualified and knowledgeable are different
    - Know the team members philosophy
    - Have the patient take an active role in their health care
TREATMENT

- No single treatment is appropriate for everyone
- Treatment does not have to be voluntary to be effective
- Treatment needs to be readily available
- Medically assisted detox can be helpful, but by itself does little to change long-term drug use
- Individual treatment plans need to be assessed and modified as necessary to ensure the needs of the client are met
  - Stages of change
  - Lifestyle changes
- Remaining in treatment for an adequate amount of time is critical
- Counseling – individual and/or group – and other behavior therapies are the most commonly used forms of substance use treatment
- Medications can be used in treatment and are most beneficial when combined with other behavioral therapies – Methadone, Suboxone, Vivitrol
TREATMENT

Addiction is a chronic disease which can be managed, but not cured.

How do you manage it?

- Possible medication
- Counseling
- Support – family and friends
NIH on Counseling

“Counseling can give an individual suffering from pain much needed support, whether it comes from family, group, or individual counseling. Support groups can provide an important supplement to drug or surgical treatment. Psychological treatment can also help people learn about the physiological changes produced by pain.”

Provide coping skills and self empowerment to heal spiritually, emotionally, mentally and physically.
PAUL SNYDER  MA, LADC - S

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